

CHUMAK, A.

Facing production. Sov. profsoiuzu 6 no. 9:47-48 Ag '58. (MIRA 11:8)

1. Predsedatel' soveta krasnogo ugolka teplovozemekhanicheskogo
tsekha Luganskogo teplovozostroitel'nogo zavoda.
(Trade unions)

DYADICHKIN, N.I., inzh.; CHUMAK, A.N.

Using the KZSh-58 pyrotechnical retarder in blasting deep holes.
Bezop.truda v prom. 6 no.4:31 Ap '62. (MIRA 15:5)

1. Rudoupravleniye im. Kirova (for Dyadichkin). 2. Krivorozhskiy
gornorudnyy institut (for Chumak).
(Blasting)

CHUMAK, A. V. (Eng.) and SHVETSOV, A. A. (Eng.)

"New Machines for Soviet Animal Husbandry", Sel'khoz mashina, No. 12, 1950.

SO: W-17087, 26 Feb 1951

~~DEKHTEROV, B. K.; CHUMAK, A. V.~~

Agricultural machinery-exhibitions

British agricultural machinery exhibition. Sel'khoz mashina No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 195~~5~~², Uncl.

CHUMAK, A.V., glavnyy inzhener.

Reducing the weight of agricultural machines. Sel'khoz mashina no.9:17-19
S '53. (MLBA 6:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo
mashinostroyeniya. (Agricultural machinery industry)

CHUMAK, A.V. (gorod Moscow).

~~CHUMAK, A.V.~~
Achievements of domestic agricultural machine construction. Fiz.v
shkole 14 no.2:12-21 Mr-Apr '54. (MLRA 7.2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystven-
nogo mashinostroyeniya. (Agricultural machinery)

LAYKHTER, E.G.; CHUMAK, A.Y., inzh., red.; BEZRUCHKIN, I.P., kand.tekhn.
 nauk, red.; ZANIN, A.V., kand.tekhn.nauk, red.; ZVOLINSKIY, N.P.,
 inzh., red.; IVANOV, I.S., inzh., red.; KLETSKIN, M.I., inzh., red.;
 PETROV, G.D., kand.tekhn.nauk, red.; PUSTYGIN, M.A., doktor tekhn.
 nauk, red.; RABINOVICH, I.P., kand.tekhn.nauk, red.; RUDASHEVSKIY,
 D.Sh., kand.tekhn.nauk, red.; SINEOKOV, G.N., doktor tekhn.nauk, red.;
 SYSOYEV, N.I., kand.tekhn.nauk, red.; FEDOROV, V.A., inzh., red.;
 CHAPKEVICH, A.A., kand.tekhn.nauk, red.; PONOMAREVA, A.A., tekhn.red.

[Bibliographic manual on tillage machinery and implements] Biblio-
 graficheskiy spravochnik po pochvoobrabatyvaiushchim mashinam i oru-
 diam. Moskva, Gosplanizdat. No.2. [Literature in the Russian
 language from 1730-1955] Literatura na russkom iazyke za 1730-1955 gg.
 Pod red. G.N.Sineokova. 1959. 263 p. (NIRA 13:9)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'sko-
 khozyaystvennogo mashinostroyeniya.
 (Bibliography--Agricultural machinery)

CHUMAK, B. A.

Cand Med Sci - (diss) "Effect of pentoxyl on the formation of scars on aseptically sewn tissues." Krasnodar, 1961. 14 pp; (Ministry of Public Health RSFSR, Kuban State Medical Inst imeni Red Army); 300 copies; price not given; (KL, 5-61 sup, 207)

IVANOVSKIY, V.G.; CHUMAK, B.P.

"Hydraulic mining in the Donets Basin." Reviewed by V.G.
Ivanovskii, B.P. Chumak. Ugol' Ukr. 5 no.12:45 D '61.
(MIRA 14:12)

(Donets Basin--Hydraulic mining)

28953
S/146/61/004/003/002/013
D217/D301

9,6000 (1089, 1139, 1331)

AUTHORS: Platunov, Ye.S., Chumak, E.I.

TITLE: Automatic electronic potentiometer of increased accuracy

PERIODICAL: Izvestiya vysshnikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 3, 1961, 19 - 23

TEXT: The paper describes a prototype instrument developed from the commercial potentiometer ЭПН-09 (EPN-09) and suitable for measuring e.m.f.'s of thermocouples used in wide range temperature measurements. The instruments scale is 2mV, range 0 - 48 mV, and the accuracy not less than $\pm 0.02 (1 + 0.05 E)$ mV. The increased accuracy results from the inclusion in the measuring bridge circuit of a calibrated signal-compensating circuit comprising 23 steps. The excess and compensated signals are registered on one chart, the former by a moving carriage with a pen, and the latter by a printing drum located at the edge of the chart. Fig. 1 shows

Card 1/61

Automatic electronic potentiometer ... ²⁸⁹⁵³
S/146/61/004/003/002/013
D217/D301

the circuit diagram and Figure 2 the recording mechanism of the instrument. The resistors R_1 , R_2 , R_3 and R_4 are similar to those used in the EPP-09, and are so chosen that the voltage drop across the resistance wire, R_p , is 2.1 mV and the potential of the point A_H with respect to the terminals b_1 , b_2 , ..., b_{24} is 0, 2, ... 46mV respectively. The terminals C_1 , C_2 , ..., C_{24} are connected to the rotary switch, S_r , whose moving arm is fixed on the same shaft as the reversible motor ЭДГ-1 (EDG-1), reduction gearbox P, position lock mechanism L, and brake T. The time necessary to change the position of contact of the switch S_r is 0.25 sec. The motor is brought into operation by closing contacts K_H or K_K when the slider A (i.e. the moving carriage K_U on Fig. 2) reaches either of the two limiting positions, A_H or A_K , on the scale. The printing drums, D, which records the magnitude of the compensated signal by Card 2/6/

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S/146/61/004/003/002/013

Automatic electronic potentiometer ... D217/D301

a figure corresponding to the position of the switch S_r , is coupled to the latter by means of a pulley drive. The figures on the face of the drum are wetted with ink by the brush B operated by the electromagnet E_2 and contacts K_b . The printing action of the moving carriage and the drums is caused by the rocking movement of the arm K_p . The blocking magnet E_1 shown on Fig. 1, prevents operation of the recording mechanism and ensures proper signal selection when the moving carriage is in the position A_H or A_K . The travelling time of the moving carriage has been reduced in the present instrument to 1.2 sec. owing to the application of feed-back in the amplifier. In considering the accuracy of the potentiometer, the authors distinguish between two groups of errors: a) These which are proportional to the magnitude of the measured signal; and b) These which are not. It is stated that the total error due to a) is $\pm 10^{-3} E$, and that due to b) ± 0.02 mV. For differential measurements the overall combined error is reduced and amounts to

Card 3/6/

Automatic electronic potentiometer ... ²⁸⁹⁵³ S/146/61/004/003/002/013
D217/D301

$\pm 0.02 \cdot [1 + 0.05(E_1 - E_2)]$ mV. There are 3 figures and 1 Soviet-bloc reference.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki
(Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: December 27, 1960

Card 4/6₄

CHUMAK, G.

AID P - 3793

Subject : USSR/Aeronautics

Card 1/1 Pub. 58 - 6/25

Author : Chumak, G., Chairman of the DOSAAF organization in the
~~Region of Makarov~~

Title : Parachutists of a Kolkhoz

Periodical : Kryl. rod., 12, 5, D 1955

Abstract : Report on the activities of parachutists of the above
mentioned region. Names are given.

Institution : None

Submitted : No date

RUMANIA / Forestry. Forest Maintenance.

K

Abs Jour: Ref Zhur-Biol., No 7, 1958, 29552.

Author : Chumak, G.

Inst : Not given.

Title : A Contribution to the Problem of Overdue Cleaning and Clearing of Fir Groves.
(K voprosu zapozdalykh prochistkakh i osvetleniyakh pikhtarnikov (Rumyniya).

Orig Pub: Rev. padurilor, 1957, 71, No 3, 150-156.

Abstract: Recommendation from the viewpoint of technical forestry are given on cleaning and clearing in fir wood containing oak, beech and spruce which has become overdue. A system of cutting wood is recommended.

Card 1/1

L 18220-65 EWT(m)/EWA(d)/T/ENP(t)/ENP(b) ASD(m)-3 MJW/JD

ACCESSION NR: AR4047534

S/C277/64/000/000/0009/0009

SOURCE: Ref. zn. Mashinostr. mat., konstr. i raschet detal. mash. /
 i. v. p. p., Abs. 8.08.58

AUTHOR: Astaf'yeva, Ye. V.; Sy*soyeva, V. S.; Tsy*pkina, Ye. D.;
 Zhurav, S. A.

TITLE: The problem of the use of high strength steels

CITED SOURCE: Sb. Legirovaniye staley. Kiev, Gostekhizdat USSR,
 1963, 14-20

TOPIC TAGS: high strength steel, heat treatment, work hardening/
 steel 45KhNFA, steel 40KhNVA, steel 37KhNZA

TRANSLATION: Methods for increasing the static and cyclical strength
 of high strength steels by heat treatment and work hardening are
 compared. An investigation of the effect of thermomechanical treat-
 ment consisting at 930-950°C, partial cooling to 700-750°C,
 deformation of 25-50%, hardening, tempering at 1000°C on the strength
 of 45KhNFA, 40KhNVA, and 37KhNZA steels showed that strength was

Card 1/2

L 18320-65

ACCESSION NR: AR4047534

increased by 25-30 kg/mm² compared to conventional heat treatment.

INT. 1 00: 121

ENCL: 00

Card 2/2

CHUMAK, G.P.

The Kherson plant is one of the oldest canning enterprises. Kons. i ov.
prom. 17 no. 12:7-9 D '62. (MIRA 15:12)

1. Khersonskiy konservnyy zavod.
(Kherson—Canning industry)

CHUKLIN, S., doktor tekhn. nauk; CHUMAK, I., inzh.

Thermal and operating tests on a low-temperature freezer. Mias.
ind. SSSR 29 no.6:26-29 '58. (MIRA 11:12)

1.Odesskiy tekhnologicheskii institut pishchevoy i kholodil'-
noy promyshlennosti.

(Meat, Frozen)

(Refrigeration and refrigerating machinery)

CHUMAK, I.

Chumak, I. - "The Golden T", (The Stavropol' Horse Farm, outline), Stavrop.
al'manakh, 4, 1948, p. 147-79.

SO: U-3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 8, 1949).

CHUMAK, I:

Experience in teaching students of automobile schools technical
servicing of automobiles in truck fleet establishments. Avt.
transp. 34 no.6:28-29 Je '56. (MLRA 9:9)

(Automobiles--Maintenance--Study and teaching)

CHUKLIN, S., prof.; CHUMAK, I.; MOGILEVSKIY, I.

Testing cold-storage rooms for freezing meat. Mias. ind.
SSSR 32 no.1:14-16 '61. (MIRA 14:7)

1. Odesskiy tekhnologicheskii institut pishchevoy i kholodil'noy
promyshlennosti.
(Meat) (Cold storage)

CHUKLIN, Sergey Grigor'yevich; ~~CHUMAK, Igor' Grigor'yevich~~; CHICHKOV,
N.V., red.; BRODSKIY, M.P., tekhn.-red.

[Intensification of the freezing process in compartment
freezers] Intensifikatsiia kamernykh morozilok. Moskva,
Gostorgizdat, 1963. 103 p. (MIRA 16:8)
(Refrigeration and refrigerating machinery)
(Meat, Frozen)

CHUKLIN, S.G., doktor tekhn. nauk, prof.; NIKUL'SHINA, D.G., kand.
tekhn. nauk; CHUMAK, I.G., kand. tekhn. nauk;
~~KREST'YANINOVA, Ye.M., red.~~

[Examples of the calculations for refrigerating units] Primery
raschetov kholodil'nykh ustanovok. Moskva, Pishchevaia pro-
myshlennost', 1964. 380 p. (MIRA 18:3)

CHUMAK, J.G., kand. tekhn. nauk; ZUBATYY, A.G., inzh.

Determining the shrinkage of meat during freezing. Khol. tekhn.
1 tekhn. no.1:116-123 '65. (MIRA 18:9)

CHUMAK, I.N.

Sanitary group in the Arctic. Zdorov'e 6 no.10:11 0 '60.

(MIRA 13:9)

1. Nachal'nik shtaba narodnoy sanitarnoy družiny, glavnyy vrach
bol'nitsy, Vorkuta, Komi ASSR.

(VORKUTA (KOMI A.S.S.R.)—PUBLIC HEALTH)

CHUDMAK, I. V.; KOLYVANOV, S. Ye.

Reclamation of Land

Attack on sand. Les i step' 4 no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May ¹⁹⁵² ~~1953~~, Uncl.

CHUMAK, I.Ye.

Unusual foreign body which penetrated into the cavity of the middle ear. Vest.otc-rin. 18 no.5:107 S-0 '56. (MLRA 9:11)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - prof. V.P.Yaroslavskiy) Vinnitskogo meditsinskogo instituta.
(EAR--FOREIGN BODIES)

CHUMAK, I.Ye.

Stimulating active participation in the questioning. Geog.
v shkole 23 no.5:65-66 S - 0 '60. (MIRA 13:90

1. Isakovskaya shkola Moldavskoy SSR.
(Moldavia--Geography--Study and teaching)

CHUMAK, K. I.

CHUMAK, K. I.: "Pressure on the elastic semi-space of a press approximately circular in plan." Min Higher Education Ukrainian SSR. L'vov State U imeni Ivan Franko. L'vov, 1956.
(Dissertation for the Degree of Candidate in Physiconathematical in Sciences).

S0: Knizhaya Letopis', No 23, 1956

CHUMAK, K. I.

"Importance of Fluorography in Disclosing Pulmonary Cancer." Cand Med Sci, State Sci-Res Inst of Roentgenology and Radiology imeni V. M. Molotov, Moscow, 1955. (KL, No 16, Apr 55)

SO: Sum. No. 704. 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

CHUMAK K.I.

SOSNOVIK, I.Ya.; KATSELEENBAUM, M.S.; LUK'YANOV, V.S.; PLAKKHIN, A.S.;
TOLKACHEVA, A.Ye.; CHUMAK, K.I.

Methods for organizing and carrying out complete dispensary services
for workers. Zdrav.Ros.Feder. 1 no.11:31-35 N '57. (MIRA 10:12)
(MEDICINE, INDUSTRIAL)

CHUMAK, K., kand.med.nauk.

Silicosis and ways to control it. Mast.ugl. no.4:30-31 '59.

(MIRA 12:6)

(Coal miners--Diseases and hygiene)

CHUMAK, K.I., kand.med. nauk

Use of fluorography in the detection of pulmonary cancer.

Trudy TSentr. nauch.-issl. inst. rentg. i rad. 10:28-34

'59.

(MIRA 12:9)

(DIAGNOSIS, FLUOROSCOPIC) (LUNGS--CANCER)

SELETSKAYA, T.S.; CHUMAK, K.I., kand. med. nauk

Use of radioactive cobalt in the treatment of lung cancer.

Trudy TSentr. nauch.-issl. inst. rentg. i rad. 10:207-212

'59.

(MIRA 12:9)

(LUNGS--CANCER) (COBALT--ISOTOPES)

LEONOV, M.Ya. (L'vov); CHUMAK, K.I. (L'vov)

Pressure under an approximately circular die. Prykl.mekh. 5
no.2:191-199 '59. (MIRA 12:9)

1. Institut mashinostroyeniya ta avtomatiki AN URSR.
(Dies (Metalworking))

CHUMAK, K.I., kand.med.nauk; BRYCHEVA, F.A.

Comparative evaluation of methods for external respiration
function tests in children engaged in competitive swimming.
Pediatriia 37 no.6:16-19 Je '59. (MIRA 12:9)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta
sanitarii i gigiyeny imeni P.F.Erismana (dir. A.Z.Belousov).
(ATHLETICS,

resp. funct. tests in child-swimmers (Rus))
(RESPIRATION, function tests,
in child-swimmers (Rus))

BAYKOV, B.K.; MELKHINA, V.P.; Prinimali uchastiye: VASIL'YEV, A.S.;
KATSENELENBAUM, M.S.; KOMAROVA, A.A.; ZHIGULINA, L.A.; TERNOVSKAYA,
L.N.; YUSHKO, Ya.K.; CHUMAK, K.I.; GUSEL'NIKOVA, E.L.; KETOVA, O.N.

Hygienic characteristics of air pollution in Gubakha and its effect
on health of the population. Uch. zap. Mosk. nauch.-issl. inst. san.
i gig. no.6:21-25 '60. (MIRA 14:11)
(NIZHNYAYA GUBAKHA--AIR--POLLUTION)

CHUMAK, K.I.

Pneumoconiosis in underground workers of coal mines. Uch.zap.
Mosk.nauch.-issl.inst.san. i gig. no.8:22-25'61. (MIRA 16:7)
(LUNGS—DUST DISEASES) (COAL MINERS—DISEASES AND HYGIENE)

GRUZDEVA, R.A. [deceased]; LUK'YANOV, V.S.; CHUMAK, K.I.

Working conditions and pneumoconiosis in miners in open coal
pits. Uch.zap.Mosk.nauch.-issl.inst.san.i gig.no.8:26-30'61.

(MIRA 16:7)

(LUNGS—DUST DISEASES) (COAL MINERS—DISEASES AND HYGIENE)

LUK'YANOV, V.S.; CHUMAK, K.I.; TSEYTLER, K.K.

Blood pressure in underground coal miners. Uch. zap. Mosk. nauch.
issl. inst. san. i gig. no. 8:46-48'61. (MIRA 16:7)
(COAL MINES AND MINING—HYGIENIC ASPECTS)
(BLOOD PRESSURE)

СЕРНАК, Е.А., старший научный сотрудник

Occupational diseases of the lungs in underground coal miners.
Российская с.м. 00311-013 :СЛ (MIRA 23:2)

Л. Московский научно-исследовательский институт легочных
заболеваний.

L 24000-66 EWT(1) SGTB DD

ACC NR: AP6014389

SOURCE CODE: UR/0391/66/000/004/0006/0009

AUTHOR: Rumyantsev, G. I. (Moscow); Chumak, K. I. (Moscow)

17
B

ORG: Institute of Hygiene im. F. F. Erismana (Institut gigiyeny)

TITLE: Osseous changes in the spine of concrete workers subjected to high-frequency whole-body vibration

SOURCE: Gigiyena truda i professional'nyye zabolevaniya, no. 4, 1966, 6-9 and insert opposite p. 8

TOPIC TAGS: vibration effect, spine, whole body vibration

ABSTRACT: X-ray investigations of the lumbar area of 78 industrial workers engaged in the manufacture of prefabricated, reinforced concrete showed pathological changes in the majority of workers. These workers had been exposed to whole-body vertical vibration (frequency 50 cps, amplitude 0.1—0.8 mm) for 27—33% of each working day for 2—5 yr. Neurological investigations revealed lumbar-sacral radiculitis in 26 subjects, first-degree vibration sickness in 8 subjects, and preliminary signs of vibration sickness in 14 others. The type and frequency of pathological changes in spinal bone and cartilage are shown in the table. It was concluded that these

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UDC: 613.644+612.75.014.45

L 24680-66

ACC NR: A16014389

Table 1. Data of spinal x-ray studies of concrete workers and control group

Workers examined	No. of subjects	Age	Period of service (yr)	Number of subjects with pronounced changes							
				Spondylitis deformans	Intervertebral osteo-chondrosis	Calcification of intervertebral disks	Change in the type of cartilage nodules (Schmorl's nodules)				
				Total	%	Total	%	Total	%	Total	%
Concrete workers	78	24-36	2-5	27	50	8	14,8	12	22,2	7	13
Cement loaders (Control group)	52	25-40	2-5	4	7,7	0	0	0	0	0	0

pathological changes are due to the effect of high-frequency whole-body vibration, since such disorders are either rare or occur commonly in people 50-60 yr old. Orig. art. has: 1 table and 4 figures.

[JS]

SUB CODE: 05, 06/ SUBM DATE: 14Jan64/ ORIG REF: 005/ OTH REF: 001/ ATD PRESS:

4249

Card 2/2 FW

CHUMAK, K.P.

Mechanized removal of mother beets from trenches. Sakh.prom. 31
no.7:51-52 J1 '57. (MLRA 10:8)

1.Sablino-Znamenskiy sakhkombinat.
(Sugar beets) (Loading and unloading)

ANDRIANOV, A.P.; ZAYTSEV, M.M.; IDEL'CHIK, I.Ye.; POPOV, D.D.[deceased];
TEVEROVSKIY, Ye.N.; UZHOV, V.N.; CHUMAK, L.I.; SHAKHOV, G.F.;
SHIROKOV, F.A.; TOMCHINA, Ye.I., red.; ZAZUL'SKAYA, V.F., tekhn.
red.

[Battery cyclones; instructions for designing, assembling, and
operating] Batareinye tsiklony; rukovodiashchie ukazaniia po
proektirovaniu, montazhu i ekspluatatsii. 2. izd. Moskva, Gos.
nauchno-tekhn.izd-vo khim. lit-ry, 1959. 103 p. (MIRA 15:1)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po khimii.
(Separators (Machines))

SAMOVER, M.L.; BODUNGEN, I.N.; CHUMAK, L.K.

Problem concerning the choice of the cross section of common
wires in networks with gas-discharge light sources. Prom.
energ. 16 no.8:40-42 Ag '61. (MIRA 14:9)
(Electric lighting--Wiring)

KRASOVITSKIY, V.S., kand.tekhn.nauk; BOL'SHAKOV, L.A., kand.tekhn.nauk;
TURCHENKOVA, Ye.K., inzh.; GORBANEV, Ya.S., inzh.; YEGNUS, R.M.,
inzh.; CHUMAK, M.A., inzh.; KISSEL', N.N., inzh.; SAL'MAN, B.Sh.,
inzh.

Increasing the stability of ingot molds by an addition of
ferrotitanium. Stal' 23 no.8:717-718 Ag '63. (MIRA 16:9)

1. Zhdanovskiy metallurgicheskiy institut, zavod "Azovstal'" i
zavod im. Il'icha.

(Ingot molds)

C P		CHUMAK, M. D.		71C	
<p>Study of a new acetone-resistant stock of acetone-ethyl alcohol bacteria with special reference to the possibility of increasing the concentration of industrial mashes. M. D. Chumak. <i>Bull. acad. sci. U. R. S. S., Str. bio.</i> 1939, 115-14. — An acetone-resistant strain of <i>B. acetothylicum</i>, grown on sterile potato cultures, was found to be suitable for the fermentation of cereal. (25-60%) potato mashes. For cereals, exceeding 60% fermentation was limited only by the viscosity of the mash. For 5-10% corn mashes fermentation by <i>B. acetothylicum</i> was very slow owing to a lack of N in suitable form. Addn. to such mashes of inorg. N ($(\text{NH}_4)_2\text{SO}_4$) or of the aq. ext. from potatoes accelerated fermentation. John Luvak</p>					
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>					
<p>RESEARCH REPORT</p>					
<p>RESEARCH REPORT</p>					

CHUMAK, M. D.

"Acetone-Ethylic Bacteria: I., Morphology of Acetone-Ethylic Bacteria,"
Mikrobiologiya, Vol. XV, No. 2, 1946.

Inst. Microbiology, Acad. Sci. USSR

The size of the acetone-ethylic bacteria cells varies according to their age. In young cultures, the cells divide into two equal parts and only in cultures of a more advanced age are unequal division with the formation of coccoid cells observed. Young cells are actively motile; they possess peritrichial flagellae.

Sporulating cells acquire a plectridial shape. In the process of sporulation a separation of chromatin, which passes into the spore, takes place. The germination of the spores is polar. The entire spore, with the exception of the envelope, is utilized in the formation of the young cell.

The cytology of the cell of acetone-ethylic bacteria corroborates their intermediate position between aerobic and anaerobic bacteria. As a reserve substance they contain metachromatin which is utilized for spore formation.

No granulose, which is found in the cells of some anaerobic bacteria, has been discovered in the cells of acetone-ethylic bacteria; nor do they contain lipoproteic inclusions characteristic of aerobic sporing bacteria.

The colonies of acetone-ethylic bacteria exist in two forms: colonies with lobe-shaped contours and smooth colonies. Lobe-shaped colonies are primary, and, by way of dissociation, colonies with a smooth border appear on them. In the course of a prolonged period of time, they do not return to their original state under same conditions

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
CHUMAK, M. D.										CA									
PROCESSES AND PROPERTIES INDEX										11C									
<p>Acetone-ethanol bacteria. II. Influence of acetone and ethanol on these and other bacteria. M. D. Chumak (Inst. Microbiol., Moscow). <i>Mikrobiologiya</i> 15, 203-9(1948); cf. C.A. 42, 3456d. --Resistance of <i>Bacillus acetosolvens</i> (I) to EtOH is much higher than that of <i>Serratia flavus</i>, <i>B. mesentericus</i>, <i>B. mycoides</i>, or <i>B. thuringiensis</i>. Vapors of Me₂CO and EtOH are much more toxic to bacteria than are the liquids in soln. The resistance of I to EtOH vapor is overcome at concns. above 1 cc./l., and to Me₂CO vapor above 0.9 cc./l. Though less resistant than I, <i>B. subtilis</i> is more resistant than the other organisms tested.</p> <p style="text-align: right;">No. 3. Julian P. Smith</p>																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
SECTION 1										SECTION 2									
SECTION 3										SECTION 4									
SECTION 5										SECTION 6									
SECTION 7										SECTION 8									
SECTION 9										SECTION 10									
SECTION 11										SECTION 12									
SECTION 13										SECTION 14									
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CHUMAK, M. D.

"Biology and Variability of Acetone-Ethyl Bacteria," Sub. 17 Jan 47, Inst of
Biology imeni A. N. Bakh, Acad Sci USSR. *Cand. Biol. Sci.*

Biokhem

Dissertations presented for degrees in science and engineering in Moscow in 1947.

SO. Sum.No.457, 18 Apr 55

CHUMAK, M. D.		PROCESSES AND PROPERTIES INDEX	
CA		112	
<p>1 Acetone-ethyl bacteria. III. Biochemical characteristics of the smooth and the laciniate varieties of <i>Aerobacillus acetoethylicus</i>. M. D. Chumak (Inst. Microbiol., Moscow). <i>Microbiology (U.S.S.R.)</i> 16, 481-491 (1947).—The rate of reproduction of the smooth variety is greater than that of the laciniate. The amylase activity of the former is also higher (2-5-fold); this is also true of the rate and degree of fermentation of potato medium. On a glucose medium the laciniate variety shows a decreased amt. of Me_2CO formation in comparison with the smooth (4-5 fold). G. M. Kosolapoff</p>			
<p>ASH-31A METALLURGICAL LITERATURE CLASSIFICATION</p>			
SECONDARY LITERATURE		PRIMARY LITERATURE	
<p>11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>		<p>11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>	

CHUMAK, M. D.

"Acetone-ethylic Bacteria: IV. Variability of Acetone-ethyl Bacteria,"
Mikrobiologiya, 17, No. 1, 1948.

Inst. Microbiology, Acad. Sci. USSR

CHUMAK, M.D.

POPOVA, L.A., kandidat biologicheskikh nauk; CHUMAK, M.D., kandidat biologicheskikh nauk.

Physiology of Penicillium and Actinomyces; data from foreign periodical literature. Antibiotiki 6 no.3:3-27 '53. (MLBA 6:7)
(Penicillium) (Actinomyces)

MEL'NIKOVA, A.A.; VASIL'YEV, G.M.; CHUMAK, M.D.; VESLOV, N.M.; SHEZHNOVA, L.P.

Culture media for detecting antibiotic substances in actinomycetes.
Mikrobiologiya 26 no.6:762-766 M-D '57. (MIRA 11:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov,
Moskva.

(ACTINOMYCES, culture,
media for detection of antibiotics (Rus)

(ANTIBIOTICS, determination,
in Actinomyces culture, culture media (Rus)

17(2,3)

SOV/20-126-5-55/69

AUTHOR: Chumak, M. D.

TITLE: Effect of High Pressure on the Intensity of Glucose Consumption by Barotolerant Bacteria (Vliyaniye vysokogo davleniya na intensivnost' potrebleniya glyukozy barotolerantnymi bakteriyami)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 5, pp 1107 - 1109 (USSR)

ABSTRACT: The investigations concerning the effect of high pressures on biological processes deal with a rather wide circle of problems (Refs 1-4). Papers on the high-pressure effect on the fermentative activity of bacteria arouse considerable interest (Refs 5-8). In the papers referred to, the bacteria were only subjected to a short-termed pressure effect in the presence of some substance to be investigated. In the present paper, the subject mentioned in the title was investigated under a pressure of several hundred atmospheres excess pressure. A spore-forming bacillus (breed Nr 187) from the Pacific mud (Ref 9) - which, according to indications by investigators, can develop at 550 atmospheres excess pressure, served as object. According to observations made by the author, the bacillus develops well,

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Effect of High Pressure on the Intensity of Glucose
Consumption by Barotolerant Bacteria

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also at normal pressure, on various nutrient media. Glucose, on which these bacteria used to develop with particular intensity, was used for the experiments. Cylindric glass balloons, 5-30 ml in size, were used for this purpose. A control part of the balloons remained under atmospheric pressure while the remaining balloons were sunk into a steel bomb filled with water (Ref 10). At a pressure of 550-750 atmospheres excess pressure, the bacteria cells multiply without division, and form threads, 200-300 μ long, without changing their diameter. Under atmospheric pressure in the balloons, with an initial concentration of cells of 1-2 millions per 1 ml, an intensive cloudiness and gas-bubble formation arise after 12-24 hours. At a pressure of 550 and more atmospheres excess pressure, the liquid remains clear, whereas small dregs form on the bottom. No gas formation arises after a transfer of this culture into normal pressure conditions. The absence of gas speaks for some changes in the carbohydrate exchange of the bacteria under the effect of high pressure. Under high pressure, the bacteria cells consume much more glucose. Table 1 shows that this value amounts to 656 mg of glucose at 310-329 million cells per 1 ml (after neutraliza-

Card 2/3

Effect of High Pressure on the Intensity of Glucose
Consumption by Barotolerant Bacteria

SOV/20-126-5-55/69

tion with chalk), while the consumption under normal pressure is 267-260 mg. This amounts to an average of 1.7 mg per 1 million cells at 550 atmospheres excess pressure. With neutralization by chalk, this value rises to 2.8 mg. At 750 atmospheres excess pressure the difference is particularly noticeable: the consumption is 2.2 mg of glucose per 1 million cells without chalk. The pH changes not very much: at normal pressure, this value falls from 7.2 (initial value) to 4.5 - 5.0. Under pressure, the pH remains in the same limits 4.0-4.5. In contrast to the control, there was no CO₂-development in the balloons under pressure. The bacterium is apparently forced to "use" more glucose in its imperfect oxidation to obtain the necessary energy than at atmospheric pressure, at which glucose can be oxidized up to CO₂. Professor A. Ye. Kriss supplied valuable hints. There are 1 table and 10 references, 2 of which are Soviet.

PRESENTED: March 11, 1959, by V. N. Shaposhnikov, Academician

SUBMITTED: March 3, 1959
Card 3/3

CHUMAK, M.D.; BLOKHINA, T.P.

Effect of high pressure on the accumulation of organic acids
during glucose fermentation by barotolerant bacteria.
Mikrobiologiya 33 no.2:230-235 Mr-Apr '64. (MIRA 17:12)

1. Institut mikrobiologii AN SSSR.

CHUMAK, M.D.; TARASOVA, N.V.; BLOKHINA, T.P.

Qualitative composition of organic acids formed during glucose
fermentation by pressure-resistant bacteria. Mikrobiologiya 33
no.4:565-568 J1-Ag '64. (MIRA 18:3)

1. Institut mikrobiologii AN SSSR.

Chumak, M.G.

USSR/General Section - Problems of Teaching.

A-5

Abs Jour : Referat Zhur - Fizika, No 1, 1958, 63

Author : Chumak, M.G.

Inst :

Title : Practical Course on Treatment of Metals in School Machine
Shops of the Kiev State Pedagogical Institute imeni A.M.
Gor'kiy.

Orig Pub : Nauk. zap. Kiivs'k. derzh. ped. in-t, 1957, 25, 144-168

Abstract : Description of the organization, procedure, and scope
of the practical course.

Card 1/1

CHUMAK, M.G.

Histochemistry of the activation of spermatozoa of white rats. Vest.
Mosk. un. Ser. biol., pochv., geol., geog. 12 no.4:39-44 '57.

(MIRA 11:5)

1. Kafedra genetiki i selektsii Moskovskogo gosudarstvennogo uni-
versiteta.

(Spermatozoa)

STROGANOVA, N.S.; CHUMAK, M.G.

Histochemical study of cellular and noncellular structures
in male sex glands of animals. Vest. Mosk. un. Ser. biol.,
pochv., geol., geog. 13 no.2:49-54 '58. (MIRA 11:9)

1. Moskovskiy gos. universitet, Kafedra genetiki i selektsii.
(Generative organs, Male) (Physiological chemistry)

CHUMAK, M.G.

Study of mitotic cycles by autoradiography. TSitologiya no.1:
24-35 Ja-F'63. (MIRA 16:6)

1. Laboratoriya eksperimental'noy tsitologii i tsitokhimii
Instituta radiatsionnoy i fiziko-khimicheskoy biologii AN
SSSR, Moskva.

(KARYOKINESIS) (AUTORADIOGRAPHY)

CHUMAK, M.G.

Effect of radiation on the mitotic cycle of the cornea
epithelium and the intestine epithel'um in mice.

Radiobiologiya 3 no. 6:866-874 '63. (MIRA 17:7)

1. Institut radiatsionnoy fiziko-khimicheskoy biologii AN
SSSR, Moskva.

YEPIFANOVA, O.I.; CHUMAK, M.G.

Effect of adrenaline on the mitotic cycle of the intestinal
epithelium in mice. TSitologiya 5 no.4:455-458 J1-Ag '63.
(MIRA 17:8)

1. Laboratoriya eksperimental'noy tsitologii i tsitokhimii
Instituta radiatsionnoy i fiziko-khimicheskoy biologii AN
SSSR, Moskva.

CHUMAK, M.G.

Studying the mitotic cycle of the epithelial cells of the cornea in mice using tritium-labeled thymidine. Dokl. AN SSSR 149 no.4: 960-962 Ap '63. (MIRA 16:3)

1. Institut radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR.
Predstavleno akademikom A.N.Belozerskim.
(KARYOKINESIS) (CORNEA) (THYMIDINE)

ACCESSION NR: AT4044488

S/0000/64/000/000/0047/0052

AUTHOR: Chumak, M. G.

TITLE: The effect of radiation on cell division in tissues having varying radiosensitivity

SOURCE: Vosstanovitel'ny*ye protsessy* pri radiatsionny*kh porazheniyakh (Recovery from radiation injuries); sbornik statey. Moscow, Atomizdat, 1964, 47-52

TOPIC TAGS: radiation sickness, mitosis, cell division, radiosensitivity, epithelial proliferation, mitotic index

ABSTRACT: In order to clarify the relationship between mitotic activity and radiosensitivity in animal tissues, experiments were performed on white CBA mice, which were irradiated with γ -rays at a dose of 400r (307 and 278r/min.) The epithelium of the cornea and of the duodenum in the same animal was examined 6, 12, 18, 24, 48, 72 and 96 hours after irradiation. The mitotic index in these tissues was found to drop sharply 1-2 hours after irradiation, and to remain low for 1-2 days. Recovery of mitotic activity took place 72-96 and 48 hours after irradiation in the cornea and duodenum, respectively. Experiments with H-thymidine showed that all the periods of the mitotic cycle are damaged after irradiation in the corneal epithelium, especially the change from the presynthetic to the synthetic period. In the cells of the duodenal epithelium, however,

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ACCESSION NR: AT4044488

these periods are not blocked completely. In both tissues, the recovery of the mitotic index is preceded by the restoration of DNA synthesis. The radiosensitivity of proliferating tissues seems to be inversely proportional to the length of their mitotic cycles, while the recovery rate of mitosis is directly proportional to the duration of individual steps in the cycle, especially the presynthetic period. Orig. art. has: 6 figures.

ASSOCIATION: none

SUBMITTED: 29Jan64

ENCL: 00

SUB CODE: LS

NO REF SOV: 001

OTHER: 018.

Card 2/2

L 54726-65 EWG(j)/EWT(m)
ACCESSION NR: AP5017921

UR/0020/64/159/005/1144/1147

AUTHOR: Chumak, M. G. 19

TITLE: Radiation sensitivity of stages of the mitotic cycle of the epithelium of the cornea and of the intestines 18
17
8

SOURCE: AN SSSR. Doklady, v. 159, no. 5, 1964, 1144-1147

TOPIC TAGS: cytology, radiology, radiation biologic effect, gamma irradiation, radiation damage, cell physiology

ABSTRACT: It was established in earlier work by the author (Radiobiologiya, Vol 3, No 6, p 866, 1963) that the mitotic cycle of the corneal epithelium is 6.5 times longer than that of the intestinal epithelium; while the ratio of the duration of the period during which DNA is synthesized to the total length of the mitotic cycle is four times greater for the intestinal epithelium than for the corneal epithelium. The epithelium of the intestine is more sensitive to radiation than the epithelium of the cornea. In work described in this instance, the radiation sensitivity of individual stages of the mitotic

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L 54726-65
ACCESSION NR: AP5017921

cycle of cells of the epithelium of the cornea and of the intestine was investigated on mice by the radioautography method (cf. M. G. Chumak, Doklady Akademii Nauk SSSR, Vol 149, No 4, p 960, 1963) after the mice had received H^3 - thymidine, in the form of a solution dropped into the eyes or in the form of an intraperitoneal injection, and had then been subjected to general irradiation with gamma-rays in a dose of 400 r. The results indicated that for cells of the epithelium of the intestine the period of DNA synthesis and the end of the G_2 stage had the highest sensitivity, while cells of the epithelium of the cornea exhibited the highest sensitivity at the end of G_1 stage, i.e., approx 2 hours before the beginning of DNA synthesis. One must assume that for cells with a shorter mitotic cycle (i.e., those of the intestine) a greater number of cells will be in a radiation-sensitive stage at the moment of irradiation, so that the percentage of damaged cells will be correspondingly greater. On the basis of the results obtained, radiation damage is due not only to interference with DNA synthesis (by action on the appropriate enzymes), but also to changes in the structure of DNA, which becomes particularly sensitive in stages of the mitotic cycle in which the chromosomes are doubled ($G_1 \rightarrow S$ or $G_2 \rightarrow M$).

Card 2/3

L 54726-65

ACCESSION NR: AP5017921

ASSOCIATION: Institut radiatsionnoy i fiziko-khimicheskoy biologii Akademii
nauk SSSR (Institute of Physico-Chemical and Radiation Biology, Academy of
Sciences SSSR)

SUBMITTED: 18Feb64

ENCL: 00

SUB CODE: LS, NP

NR REF SOV: 004

OTHER: 012

JPRS

Card

3/3

CHUMAK, M. M.

Study of morbidity statistics of kolkhoz farmers with temporary loss of working capacity. Soviet zdravookhr. No. 5, Sept.-Oct. 50. p. 32-7

1. Of the Institute of Public Health Organization and History of Medicine imeni N. A. Semashko (Director -- N. A. Vinogradov) of the Academy of Medical Sciences USSR.

CLML 20, 3, March 1951

CHUMAK, M. M.

CHUMAK, M. M. - "Results of a Study of Illness Among Kolkhoz Members Which Causes a Temporary Loss of the Capacity to Work." Sub 12 Nov 52, Acad Sci USSR. (Dissertation for the Degree of Candidate in Medical Sciences).

SO: Vechernaya Moskva January-December 1952

CHUMAK, M.M.

SEMASHKO, N.A.; CHUMAK, M.M.

Medical examination of collective farmers as the first step of prophylactic and therapeutic service. Med.sestra no.12:3-6 D '53.
(MIRA 6:12)

1. Nauchnyy sotrudnik Instituta organisatsii zdavookhraneniya i istorii meditsiny (for Chumak).

(Medicine, Rural)

CHUMAK, M.M., kandidat meditsinskikh nauk.

Preventive and therapeutic public health methods for the rural
population in Belorussian S.S.R. Sov.med. 18 no.5:27-29 My '54.
(MLRA 7:5)

1. Iz Instituta organizatsii zdavookhraneniya i istorii meditsiny
im. N.A.Semashko Akademii meditsinskikh nauk SSSR (direktor Ye.D.
Ashurkov). (White Russia--Public health, Rural)
(Public health, Rural--White Russia)

CHUMAK, M. M.

USSR/Medicine - Literature, Feldsher-Midwife Post

FD-2194

Card 1/1 Pub 102-14/15

Author : Chumak, M. M., Candidate of Medical Sciences (Reviewer)

Title : Review of "Fel'dshersko-akusherskiy punkt na sele; organizatsiya raboty" (Feldsher-midwife post in a village; organization of work), by Konstantinov, G. F. and Bychkov, I. Ya., Medgiz, 1954, 125 pages.

Periodical : Sov. zdav., 3, 60-62, May-June 1955

Abstract : Organization of feldsher-midwife posts in rural areas was prompted by the need for bringing medical aid closer to the people working in kolkhozes, sovkhoses, MIS, and field camps. This basic unit of rural health service, with its large army of feldshers and midwives on independent duty in remote rural areas, has long been looking forward to publication of a reference book suitable for that branch of medical service. This 125 page book was, therefore, well received by the medical community. The book contains an introduction and is divided into 16 chapters. Forty thousand copies of this book were printed.

Institution : —

Submitted : —

CHUMAK, M.M.

Incidence of diseases causing temporary disability in collective
farm workers according to data from Mikhnevo District in Moscow
Province. Zdrav.Ros.Feder. 1 no.9:14-18 S '57. (MIRA 10:11)
(MIKHNEVO DISTRICT (MOSCOW PROVINCE)--MEDICINE, RURAL)

CHUMAK M. M.

CHUMAK, M.M., kandidat meditsinskikh nauk

"Basic problems and methods of inspecting municipal and rural hospitals" by I.B.Rostotskii. Reviewed by M.M.Chumak. Sov.zdrav. 16 no.7:62-63 J1 '57. (MIRA 10:11)
(HOSPITALS—INSPECTION) (ROSTOTSKII, I.B.)

CHUMAK, M.M.

Problems of medical service for rural areas. Zdrav. Ros. Feder. 3 no.4:
3-7 Ap '59. (MIRA 12:4)

1. Iz kafedry organizatsii zdravookhraneniya (zav. S.V. Kurashov) I
Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.
(PUBLIC HEALTH, RURAL)

CHUMAK, M.M.; SVIRIDOV, N.A.

Outpatient care for collective farmers and machine-tractor station workers of Krapivenskiy District, Tula Province. Trudy 1-go MMI 5:210-217 '59. (MIRA 13:8)

1. Iz kafedry organizatsii zdravookhraneniya (zav. kafedroy - dotsent S.V. Kurashov) 1-go Moskovskogo ordena Lenina meditsinskogo instituta im. I.M. Sechenova.
(KRAPIVENSKIY DISTRICT (TULA PROVINCE)--AGRICULTURAL LABORERS--MEDICAL CARE)

CHUMAK, M.M., kand.med.nauk

"Guarding the people's health" by V.V. Gusak. Reviewed by M.M.
Chumak. Sov.zdrav. 19 no.2:88-89 '60. (MIRA 13:5)
(CHERNOVTSY PROVINCE--PUBLIC HEALTH)
(GUSAK, V.V.)

CHUMAK, M.M.; LESKOV, V.A. (Kurskaya oblast')

Work of the feldsher on the collective farm. Fel'd. i akush. 25
no.2:40-43 P '60. (MIRA 13:5)
(KALINOVKA (KURSK PROVINCE)--AGRICULTURAL LABORERS--MEDICAL CARE)

CHUMAK, M.M., kand.meditsinskikh nauk; VISHNEVSKAYA, kand.meditsinskikh nauk

Further improvement in medical services for the rural population according to the decisions of the December Plenum of the Central Committee of the C.P.S.U. Sov. med. 24 no.4:10-16 Ap '60.

(MIRA 13:8)

1. Iz Instituta organizatsii zdavookhraneniya i istorii meditsiny im. N.A.Semashko (dir Ye.D. Ashurkov) Ministerstva zdavookhraneniya SSSR.

(PUBLIC HEALTH, RURAL)

GHUMAK, M.M.; VISHNEVSKAYA, I.I. (Moskva)

For an improvement in the medical care of agricultural workers. Fel'd.
1 akush. 25 no.6:30-34 Je '60. (MIRA 13:9)
(AGRICULTURAL LABORERS—MEDICAL CARE)

CHUMAK, M.M.; PUGINA, V.V. (Moskva)

Rural public health in the Socialist countries as revealed by the
Fourth Conference of the Ministers of Public Health of the Socialist
Countries. Zdrav. Ros. Feder. 4 no.12:29-33 D '60. (MIRA 13:12)
(COMMUNIST COUNTRIES---PUBLIC HEALTH, RURAL)

DAVIDOVA, M.M.; VISHNEVSKAYA, I.I.; CHUMAK, M.M., red.; MATVEYEVA, M.M.,
tekhn. red.

[Industrial hygiene on dairy farms] Sanitarnye usloviia truda na
molochnotovarnykh fermakh. Moskva, Medgiz, 1961. 52 p.
(MIRA 14:12)

(DAIRY INDUSTRY—HYGIENIC ASPECTS)

CHUMAK, M.M.; VISENEVSKAYA, I.I.; SAFONOV, A.G., red.; BALDINA, N.F.,
tekh. red.

[Rural medical service in the U.S.S.R.] Meditsinskoe obsluzhi-
vanie sel'skogo naseleniia SSSR. Moskva, Medgiz, 1961. 171 p.
(MIRA 15:2)

(PUBLIC HEALTH, RURAL)

CHUMAK, M.M., kand.med.nauk

Study of morbidity with temporary disability among collective farmers.
Zdrav. Ros. Feder. 5 no.1:13-19 Ja '61. (MIRA 14:1)

1. Iz Instituta organizatsii zdravookhraneniya i istorii meditsiny
ime~~n~~i N.A. Semashko (dir. Ye.D.Ashuk~~o~~kov).
(MINKHNEVO DISTRICT—DISEASES—REPORTING)
(DISABILITY EVALUATION)

CHUMAK, M.M.; VISHNEVSKAYA, I.I.

Medical service for the rural population of the U.S.S.R. Med. sestra 20
no.7:3-7 J1 '61. (mish 14:10)

1/ Iz Instituta organizatsii zdravookhraneniya i istorii meditsiny
imeni N.A.Semashko Ministerstva zdravookhraneniya SSSR, Moskva.
(PUBLIC HEALTH, RURAL)

MANSVETASHVILI, V.M.; CHUMAK, M.M., starshiy nauchnyy sotrudnik

Public health in the Virgin Territory. Sov. zdrav. 20 no.7:6-12
'61. (MIRA 15:1)

1. Zaveduyushchiy TSelinnym krayevym otделom zdravookhraneniya (for
Mansvetashvili). 2. Institut organizatsii zdravookhraneniya i istorii
meditsiny imeni N.A.Semashko (for Chumak).
(VIRGIN TERRITORY--PUBLIC HEALTH)

CHUMAK, M.M., kand.med.nauk

Ways for expanding the rural public health system during the
general replanning. Zdrav. Ros. Feder. 6 no.1:6-10 Ja '62.
(MIRA 15:3)

1. Iz Instituta organizatsii zdravookhraneniya i istorii
meditsiny imeni N.A. Semashko (dir. P.I. Kal'yu).
(PUBLIC HEALTH, RURAL)

CHUMAK, M.M., kand.med.nauk; TUL'CHINSKIY, Ye.M.

Medical preventorium on a collective farm. Fel'd. i akush. 28
no.1:4-7 Ja'63. (MIRA 16:7)

1. Iz kafedry organizatsii zdravookhraneniya Chernovitskogo
meditsinskogo instituta i oblastnoy klinicheskoy bol'nitsy.
(KITSMAN'—MEDICINE, PREVENTIVE)

CHUMAK, M.M.; TUL'CHINSKIY, Ye.M. (Chernovitskaya obl.)

Organization of medical prophylactic stations on collective
farms. Sovet. med. 27 no.6:103-106 Je'63 (MIRA 17:2)

CHUMAK, M.M. (Chernovitskaya oblast'); TUL'CHINSKIY, Ye.M. (Chernovitskaya oblast')

Medical preventoria in collective farms. Vrach. delo no.10:
120-122 0 '63. (MIRA 17:2)

CHUMAK, Mariya Mikhaylovna; ITSKOV, Yakov Zakharovich; PUGINA,
~~V.V., red.~~

[Work organization in a Central District Hospital; experience in the work of the Vizhnitsa Hospital in Chernovtsy Province] Organizatsiia raboty tsentral'noi raionnoi bol'nitsy; opyt raboty Vizhnitskoi bol'nitsy Chernovitskoi oblasti. Moskva, 1965. 191 p.

(MIRA 18:8)

CHUMAK, N.

Making metal-cutting tools in school. Politekh.obuch. no.9:
72-73 S '59. (MIRA 12:12)

1. Pedagogicheskiy institut g.Kiyeva.
(Metal-cutting tools)

CHUMAKOV, M.P.; L'VOV, D.K.; SARMANOVA, Ye.S.; GOL'DFARB, L.G.; NAYDICH, G.N.;
CHUMAK, N.F.; VIL'NER, L.M.; ZASUKHINA, G.D.; IZOTOV, V.K.;
ZAKLINSKAYA, V.A.; UMANSKIY, K.G.

Comparative study of the epidemiological effectiveness of vaccinations with tissue culture and brain vaccines against tick-borne encephalitis. Vop. virus. 8 no.3:307-315 My-Je'63.

(MIRA 16:10)

1. Institut poliomyelita i virusnykh entsefalitov AMN SSSR, Moskva i Kemerovskaya oblastnaya sanitarno-epidemiologicheskaya stantsiya..

(ENCEPHALITIS—PREVENTIVE INOCULATION)

CHUMAKOV, M.P.; L'VOV, D.K.; GAGARINA, A.V.; VIL'NER, L.M.; RODIN, I.M.;
ZAKLINSKAYA, V.A.; GOL'DFARD, L.G.; KHANINA, M.K.

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against tick-borne encephalitis. Report No.1: Influence of the
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